

Patent claims

1. Expression system, containing one or more nucleic acid(s) comprising
 - a) at least one nucleic acid for an IL-15/Fc fusion protein,
 - b) at least one promotor and
 - c) at least one nucleic acid for a CD5 leader,the promotor and the nucleic acid for the CD5 leader being functionally linked to the nucleic acid for the IL-15/Fc fusion protein.
2. Expression system according to Claim 1, in which the promotor is a CMV promotor.
3. Expression system according to Claim 1 or 2, in which the promotor is part of a transcription-regulating unit which additionally contains an intron, in particular intron A.
4. Expression system according to any of Claims 1 to 3, in which the Fc part of the fusion protein is an Fc fragment of an immunoglobulin G.
5. Expression system according to any of Claims 1 to 4, additionally containing
 - d) at least one nucleic acid for a selectable marker gene.
6. Expression system according to any of Claims 1 to 5, additionally containing at least one nucleic acid for a polyadenylation signal.
7. Expression system according to any of Claims 1 to 6, additionally containing ribosomes, amino acids and/or tRNAs.
8. Expression system according to any of Claims 1 to 7, which comprises only one nucleic acid.

9. Expression system according to any of Claims 1 to 8, containing a nucleic acid having the sequence of SEQ ID No. 1, SEQ ID No. 2 or SEQ ID No. 3 or a nucleic acid coding for a polypeptide of SEQ ID No. 4 or SEQ ID No. 5.
- 5 10. Nucleic acid, containing the components a) to c) of Claims 1 to 4 and optionally component d) of Claim 5.
11. Nucleic acid, containing the sequence of SEQ ID No. 1, SEQ ID No. 2 or 3 or a nucleic acid coding for a polypeptide of SEQ ID No. 4 or SEQ ID No. 5.
- 10 12. Host cell, containing an expression system according to any of Claims 1 to 9 or a nucleic acid according to Claim 10 or 11.
13. Host cell according to Claim 12, which is a mammalian cell.
- 15 14. Host cell according to Claim 12 or 13, which is a cell of the CHO cell line or derivatives thereof, in particular a CHO-K1 cell line.
- 20 15. Process for preparing an IL-15/Fc fusion protein, comprising
- 25 a. providing a host cell according to any of Claims 12 to 14,
b. culturing the host cell,
c. selecting, where appropriate, and
d. isolating the expressed IL-15/Fc fusion protein.
16. Process according to Claim 15, in which the host cell is a mammalian cell, preferably a cell of the CHO cell line or derivatives thereof, particularly preferably a CHO-K1 cell line.
- 30 17. Process according to Claim 15 or 16, in which the IL-15/Fc fusion protein is prepared in an amount of at least 10 pg/(cell × day), preferably in an amount of at least 15 pg/(cell × day).

18. Use of an expression system according to any of Claims 1 to 9, of a nucleic acid according to Claim 10 or 11 or of a host cell according to any of Claims 12 to 14 for preparing an IL-15-Fc fusion protein.
- 5 19. Use of a CD5 leader for expressing a protein in CHO cells and derivatives thereof, in particular CHO-K1 cells.
20. Use according to Claim 19, in which expression of the protein is regulated by a CMV promotor, in particular in combination with intron A.